XP-002135499

3/5 - (C) FILE CAPLUS
AN - 1984:64118 CAPLUS
DN - 100:64118
TI - Enzymic reactions and reactors containing enzymes crosslinked to a filter containing inorganic materials.
IN - Simon, S.
PA - Research Products Rehovot Ltd., Israel
SO - Israeli, 20 pp.
CODEN: ISXXAQ
DT - Patent
LA - English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PN -	[redacted]	A	19820930	IL 1980-59339	19800208

AB - Enzymes are immobilized on a microporous depth filter made of cellulose and an inorg. filter aid (i.e., diatomaceous earth) and used in a flow-through reactor adapted for this filter. One of these immobilized enzymes is used for resoln. of an racemic mixt. of an amino acid deriv. Thus, Alcalase was immobilized in the pores of a [redacted] Plus filter made of cellulose and an inorg. filter aid by crosslinking of the enzyme to the pores with glutardialdehyde. The rate of hydrolysis of acetyl-L-methionine Me ester (in a DL mixt.) by this enzyme in a flow-through system, obtained at 76% conversion, was 47 .mu.mol/min/cm2 of matrix. This rate was far above those obtained with Alcalase immobilized on membranes made of a cellulose ester, acrylonitrile-polyvinyl chloride copolymer-coated nylon, or silica-modified polyvinyl chloride. The immobilized enzyme could be used to resolve the racemic mixt. of the substrate into acetyl-L-methionine and acetyl-D-methionine Me esters. Chymotrypsin, .alpha.-amylase, and thermoamylase were also immobilized on the cellulose-inorg. material filter, with a resulting acceleration in substrate hydrolysis compared to other reactors.

Fig.1

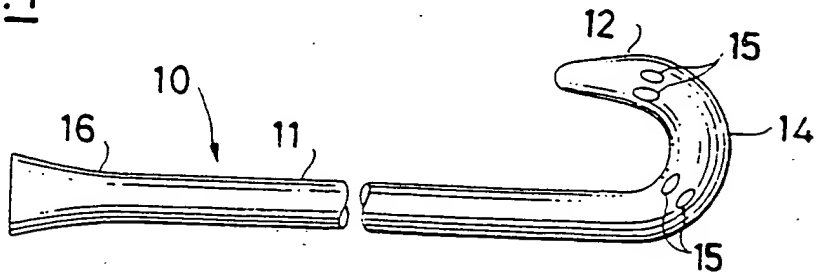


Fig.2

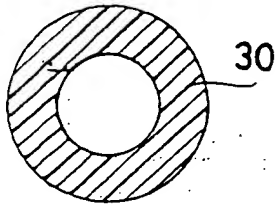
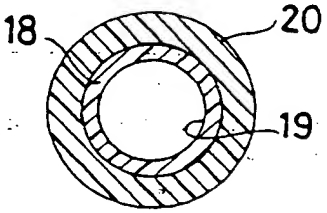


Fig.3



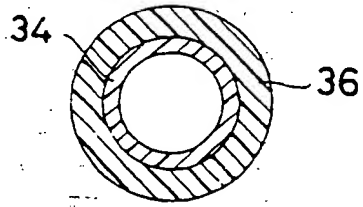


Fig.4

Fig.5